

Conference Meeting with professor Minho Lee

from Kyungpook National University

HAO DING

August 2016

摘要

The conference lasts for two days with seven teachers and students giving their reports. Respectively are professor Minho Lee, professor Haiyong Zheng, teacher Min Fu, teacher Zhibin Yu and three postgraduate student Jialun Dai, Sangwook Kim and Jonghong Kim.

Each of them gave a speech about their own work in Digital Image Processing. Besides, we had big discussions about the speeches.

目录

1	August 28th	1
1.1	Minho Lee	1
1.2	Haiyong Zheng	2
2	August 29th	3
2.1	Jialun Dai	3
3	conclusion	4

Section 1

August 28th

1.1 Minho Lee

Minho Lee is a professor in Kyungpook National University (KNU).

Professor Lee indicated that technoledge nowadays have three key directions:

- Simple and easy technoledge
- Optional technoledge
- New business model

Which means that technoledge should be simplified in using and understanding. And the development of no matter what kind of technoledge can't be limited to one constant way. Last but not the least, as the example of Apple, we have to creat new business model to get propulsion development.

He expressed that the main current at present is intellegence. As human, our brain have the ability to react to most signals that our body accept from the external environment. Then the brain is more like a headquarter, it gives a command so that we would generate different emotions, feelings and reactions. It works just like an "I/O" system. The perception and action is a circle without our consciousness. It's the goal of Deep Learning research that we expect the computer has the same or even better ability as the human brain's.

Professor Lee gave many examples as well. My favourate one is that a robot could learn from a humanbeing by listening to him pointing and teaching what thing the subject on the table is and suggest your next pace. He mentioned that all of us have two eyes to estimate the distance and the movement of subjects in sight. But former devices have only one camera to catch pictures. Therefore the robot in the video is made of two cameras and that's why he can accurately follow directions. With deep learning, he has the intellegence to learn things. And like the input method we use to type, once you tell him you'll add milk to coffee, he will forwardly suggest you to have some milk when you want to drink coffee.

The other direction is automatic drive using deep learning. But I missed most of the presentation this part.

Professor Lee introduced that the three main breakthrough in his lab is algorithms, parallel computing and big data.

1.2 Haiyong Zheng

Our teacher Haiyong Zheng's speech has three main part. The first part is to introduce the city of Qingdao. The second part is about retinal imaging registration. And the third part is about alga classification.

The second part about retinal imaging registration is profit to patients' eye disease. Professor Zheng tried to registering the former eye image with the sick eye image to find which part of the eye suffered from disease.

He summarized that retinal imaging registraion can be classified as two different method: intensity-based and feature-based. And the feature-based method is more popular than the other one. And if we want to improve the means, we have to add more features. But the contradiction is that once we use more features, the recognition would be more complex, and the accuracy of recognition would be inevitable declined.

Then he introduced some work about alga classification.

Section 2

August 29th

2.1 Jialun Dai

My upperclassman Jialun Dai mainly introduced his work about alga classification.

Due to the lack of the samples, he did different kind of transformations to the sample images such as rotation, translation, rescaling, shearing and flipping. The transformations are used for testing the accuracy of his algorithms when the images are of various size and angle.

He explained that different species may have similar features while same species of algas may have different features. So it's hard to tell one species of alga from another. Thus he used different means to classify them.

Section 3

conclusion

All of the speechers made great speeches for us.

The first thing is that I deeply feel that I really lack of professional knowledge of my major. And I'm now eager to develop my english ability especially the listening part. My plan is to use english more often. I'll try to read more and watch more english files and videos.

The second thing is that as far as I'm concerned, it's an important ability to raise questions. I'm fond of the environment when everyone is in one discussion.